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The Spring Garden.

IN these early May days the spring garden at the north, if it has been skillfully planned, is unfolding its choicest treasures, and is yielding a pleasure more intense than any which the wealth of flowers, the luxuriance of foliage or the fragrance and beauty of ripened fruits will bring as the season grows older. No later flowers cause such genuine delight as that with which we welcome the harbingers of spring. This is not altogether on account of their intrinsic beauty, although many of them are strangely fair; nor is it yet because they have so few rivals and occupy the field comparatively alone. Perhaps a stronger reason for the appeal they make to the imagination is the promise which they bring of a revival of life at hand—a promise especially cheering after our long and dreary northern winters. Besides this, there is a singular delicacy and fragility about those which first venture out into the wild weather, and this takes hold upon our sympathies. But whatever may be the causes of this universal manifestation, the fact remains that every one who has any admiration for flowers, or appreciation of them, is especially attracted by those which bloom out-of-doors in this early season. Many of these, like the Snowdrops and Winter Aconite, appeared before the grass began to show its first tender green, and now, when the branches of many of the trees are still bare, the spring garden is filled with flowers of the most delicate texture and richest color. Mere lists of plants are usually tedious, but a simple catalogue of even the commoner ones that have already flowered has a certain attractiveness. There is something akin to music in the very names of Anemone, and Scilla, and Primula, and Trillium, and Triteleia, and Uvularia, and Viola; and so there is in the common names like Snowflake, Wake-Robin, Grape Hyacinth, Fritillary, Wind-flower, Twin-leaf, Mitrewort and Violet. The variety of these flowers is almost endless. Collectors have ransacked all the temperate regions and high mountain ranges of the globe for hardy, early-blooming plants, so that there is no place so pretentious that the spring garden cannot be made sufficiently elaborate and expensive to correspond with its other features, and there is no garden so modest that a corner of it cannot, with trifling labor and expense, be becomingly brightened with early flowers as beautiful as those borne by the most expensive rarities.

Now there are many persons who feel with each returning spring the charm which invests the flowering shrubs and herbs of the season, but the time for arranging the spring garden has then already passed, and later in the year when the bulbs should be planted, the beauty of the early flowers has faded from the memory and the matter is postponed until another year is lost. Of course, the proper time to begin garden work is now, in every instance. Plans cannot be laid too early. If a rock-garden is to be made—and many alpine plants will thrive better when their slender roots can find coolness and moisture in the deep pockets of well constructed rock-work than anywhere else—it is none too early to begin. Such a place can only be successful when the rocks are carefully placed, so as to check the flow of surface-water and allow it to percolate slowly into the soil between them. This soil must have time to settle and become compact, for any air-spaces mean dryness and death to root and plant. Another effective arrangement for a spring garden is where a southward sloping space of open greensward or a small lawn containing a few specimen-trees is surrounded by a shrub-border, and this border may again be surrounded by trees. These shrubs should be, as a rule, early flowering, with taller ones like certain of the Thorns, the Dwarf Apples and Lilacs on the outside, with Exochordas, Spiræas and Bush Honeysuckles and others of this size in front of them, and an irregular belt along the inner margin containing scattered groups of Azaleas, Daphnes, Andromedas, hardy Heaths and other low-growing shrubs. Between these shrub-groups may be set hardy bulbous plants and other perennials which bloom at the season. Such a garden can be made singularly effective when the curves which unite the turf with the border are gracefully laid, and when this margin is broken occasionally by some shrub like Van Houtte's Spiræa, set close to the turf, to relieve all appearance of formality by throwing its arched branches out upon the grass. A garden of this kind has already been described with some detail in this journal (see vol. ii., p. 277).

But no one need be deterred from projecting a spring garden because he can have no shrub-bordered lawn and no costly rock-work. One of the most interesting collections of spring flowers with which we are acquainted is in a city lot. It is interesting because its collector is a specialist who takes pains to find the choice species of Tulips, the most interesting forms of Snowdrops, Squills and Daffodils, and other early flowers; and because he cares for his own garden and has become an expert and an authority in spring flowering plants and their cultivation. When one has scarcely a square rod of ground there is room along the southern line of the house-foundation for many an early flower which needs its protection, and it must be a scanty lot indeed which will not furnish room for some clumps of the Poet's Narcissus. Novices should remember that the plants which flower next spring will have made every preparation to bloom the season before, and therefore the sooner herbaceous plants are in their places the better, while the bulbs will, as a rule, show better bloom if they are in the ground in early autumn. Those who are not novices will need none of these reminders, but to them we suggest the spring garden as a fascinating field of special study; and there need be no fear that this field is too contracted for a serious student. It will furnish ample scope for the most patient investigation. It is to the men who devote themselves to a single family of plants like the Primula or Narcissus to whom we look for instruction, and while they are adding to the sum total of horticultural knowledge they will find in the study itself its own ample and satisfying reward.

It is a matter of rare occurrence that names of botanists, often associated in scientific language with the names of trees, gain any real foothold in popular language. Magnolia, a name which commemorates the scientific labors of Pierre Magnol, a French botanist of two centuries ago, is a conspicuous exception in this country, and our great evergreen Magnolia is only known to the people living in those parts of the southern states where it grows as "Magnolia." The name of David Douglas is occasionally associated in British Columbia with the Fir-tree which he discovered, but "Douglas Spruce" can hardly be said to have established itself very firmly or very generally yet in the language of the people of any part of western America. Cases are less rare where the names of scientific worthies, perpetuated in the names of plants other than trees, are in common use; but trees, which are usually of importance to man or sufficiently conspicuous to attract his attention, obtain naturally local vernacular names before science imposes others on them, and the common names once engrafted on a language, almost always hold their own among the people of the country where the trees are found. It was a matter, therefore, of much interest and some surprise to hear recently, in western Florida, the *Torreya taxifolia*, one of the rarest of all our trees, spoken of generally as the "Torrey-tree"; and to find that Stinking Cedar, the unattractive name by which this tree was first known to the inhabitants of western Florida, was gradually being replaced by that of one of the Nestors of American botany. The reason for this change is found perhaps in the fact that this tree, from its rarity, the interest attached to the geographical distribution of the small genus to which it belongs, and the reverence which his successors have always felt for the name of John Torrey, has several times been visited in its remote and isolated stations on the banks of the Appalachicola by men of science from distant parts of the country. When the people of the region, therefore, found that men of mature years and apparently in the enjoyment of all their faculties had journeyed thousands of miles merely to look at a tree which they had always considered as valuable only because it furnished indestructible material for fence posts, their own interest and curiosity became aroused; and therefore hearing these eccentric strangers talking always about Torrey and Torreya, the name has gradually become fixed, and now "Torrey-tree" may often be heard in at least two or three counties of west Florida.

Sir Dietrich Brandis offers the advice about the care of our forests, which appears in another column. If the voice of any man speaking words of warning on this subject is worth listening to, it is the voice of Sir Dietrich, or, as he is, still, better known, Dr. Brandis. No one better realizes the evils which follow excessive forest-destruction, or the possibilities of forest-administration. He it was who planned and successfully executed the scheme of forest-administration for India, one of the triumphs certainly of modern administrative genius. Forest-administration in India was established in the face of immense local opposition without the assistance of trained or adequate subordinates of any sort, and under natural and social conditions of great difficulty. The government forests of India were thirty years ago in as great peril as our own western forests are now, and the methods by which our forests are to be saved are very similar probably to the methods which Brandis put into execution, and which, at the end of a comparatively few years, not only secured the permanency of the Indian forests, but made them yield a large and steadily increasing income. No man who has yet spoken of our forests has done so out of such full knowledge of forest-conditions almost identical with our own, or with such extended knowledge gained in actual forest-administration, conducted on a vast scale and carried on under conditions which, at the outset, must have seemed well nigh hopeless to him and his friends.

Some Old American Country-Seats.
VI.—Hyde Park.

In the days of the Revolution, Dr. Samuel Bard was a leading physician of New York. He was a decided Tory in feeling, yet he was a friend of Washington, and when the war was over, instead of migrating, he retired to a country house by the Hudson. He purchased his lands of the famous "nine partners," and named his seat in honor of Sir Edward Hyde, one of the Colonial governors of New York.

Hyde Park is to-day the name of a station on the Hudson River Railroad, the first stop above Poughkeepsie. The traveler who alights here looks in vain for any village, and after following the one road a little way, he finds himself beside a foaming waterfall, and sees beyond the stream a wide-spread and apparently unoccupied country-side, composed of woods, grass-lands, hills and vales, which he rightly conjectures to be Hyde Park proper. If the public road be followed as it winds up the valley to its junction with the old Albany post-road at Hyde Park Corner, and then the post-road be taken northward, the main gate of the park will be reached; but the park may also be entered from the river-side below the waterfall in Crown Elbow Creek.

A bridge, which leads to a landing on the bank of the Hudson, here spans the creek, and a narrow road enters the park in very modest fashion just beyond the bridge. Beginning at this gate, a belt of woodland stretches northward for perhaps a mile along the bank of the river, occupying the summits of the little crags and knolls which here make the rocky shore, and enclosing many charming bits of rocky woodland scenery. Parallel with the river, and just east of the wood, lies a gently hollowed valley of smooth grass-land, beautifully fringed by the waving edge of the dense wood on the one hand, and on the other rising with concave lines to meet the sharply ascending curves of a high, steep and grassy bank, which, with the great trees near its summit, bounds the scene on the east.

The little road which enters by the bridge commands one or two views of this bank and the long, green glade at its foot, and then it turns to follow the windings of the stream which comes dashing down over rough ledges and under shadowy Hemlocks on the right. The valley narrows until there is only just room enough for the stream and the road; and here a foot-path breaks off to the left, and taking a rapidly rising open ridge, plainly indicates its intention to gain the summit of the high bank with the great trees which was lately in view. The road continues up the winding glen, passing by several pretty waterfalls; and, bye and bye, where the valley broadens and the stream is held back by a low dam, it joins the main approach-road, which here bridges the creek on its way from the Albany highway to the house. The united roads next ascend by one easy zigzag to a broad plateau of grass-land, set with numerous and variously grouped and scattered trees of noble age and stature, between the trunks of which the house soon appears in the distance. (See the picture on page 226.) This level ground is both wide and long, and its strikingly simple, open and stately effect is greatly heightened by the fact that from every part of it is visible in the west, beyond and behind all the massive tree trunks, an indefinite expanse of blue distance. When the house is reached, by the road just described or by the footpath before mentioned, it is seen to stand close to the brink of the plateau; in other words, upon the verge of the irregular, mile-long grassy bank the visitor saw first from below. The sudden descent of this bank, and the character of the trees upon it—chiefly old Chestnuts and Oaks—are shown in the picture on page 227. Some of the largest trees lean outward from the bank, and most of them grip the ground with a vigor befitting veterans who have long wrestled with the gales.

The view from the bank near the house embraces perhaps ten miles up and down the mighty river, with the varied opposite bank, and the wooded promontories near Staatsburg; and, in the far distance, the blue ridges of the highlands below Newburgh, the dark outlines of the Shawangunks in the west, and the pale summits of the Catskills in the north. Foreground, middle distance and distance are presented here with sharp definition. This is a scene not surpassed on the upper Hudson, unless the better composition of the river view from Ellerslie should place that wonderful picture first.

As the illustrations show, the house at Hyde Park is of a somewhat stiff and cold type; but it is simple and dignified, and in this respect is well fitted to its imposing site. Its south and west sides meet the grass of the park, its east side is the entrance front, and to its north-east corner is attached an ample kitchen and laundry yard, reached by a special road from the Albany highway, which, abreast of the house, has

gained the level of the upland. The stables stand apart a little to the north, and the greenhouses, with an enclosed garden attached to them, lie in a similar position on the plateau to the south. Both are entirely surrounded by the open groves of the park.

According to Mr. Downing, André Parmentier, of Long Island—the first landscape-architect who practiced in America—arranged the roads, buildings and plantations of the estate, under the patronage of Dr. Hosack, who succeeded Dr. Bard as proprietor. No man ever undertook a more responsible service in the realm of taste applied to landscape, nor one in which it would have been easier to fail by spoiling what nature had so magnificently provided. What a contrast is his work to the usual practice of the modern amateur, who, being a cultivated gentleman, considers himself quite able to lay out his own place. With the help of a jobbing gardener, he too often first despoils the natural scene of much that makes its character and beauty, for the sake of introducing supposedly decorative elements such as strange trees and the short lived brilliancy of flower-beds. Montgomery Place and Hyde Park should teach us better. The soft and tranquil beauty of the gentle landscape of the first named, and the broad stateliness of the upland scenery of the second, must impress all sensitive minds as no splendor of embellishment can. Decorative gardening, as it is often introduced in modern country-seats—that is, in patches scattered here and there—would at once kill the effectiveness of these old seats. Their power over the mind and heart consists chiefly in the unity of the impression which they make. Their scenery is artificial in the sense that Nature, working alone, would never have produced it; but the art which has here "mended nature," to use Shakespeare's phrase, has worked with Nature and not against her. It has, by judicious thinning, helped Nature to grow great trees; it has spread wide carpets of green where Nature hinted she was willing grass should grow; it has in one place induced a screen of foliage to grow thickly, and in another place it has disclosed a hidden vision of blue distance; and so, while it has adapted Nature's landscape to human use, it has also, as it were, concentrated and intensified the expression of each scene. "Almost all natural landscapes are redundant sources of more or less confused beauty, out of which the human instinct of invention can, by just choice, arrange, not a better treasure, but one infinitely more fitted to human sight and emotion, infinitely narrower, infinitely less lovely in detail, but having this great virtue, that there shall be nothing which does not contribute to the effect of the whole." Montgomery Place and Hyde Park on the Hudson may serve as illustrations of these good words of Mr. Ruskin's.

Two other excellencies of these old seats remain to be mentioned so that they may perhaps be imitated. Firstly, the roads and paths, instead of displaying themselves and their curves as if they were the chief elements of beauty in park-scenery, are rightly made subordinate and inconspicuous, as befits the mere instruments of convenience they really are. When they run straight across level country they are shaded by trees in rows; when they curve, as they do only for good reason, formality of planting instantly stops. They lead to their objective points with directness and without superfluous flourish. Secondly, the makers of these old seats were wise in their generation in that they chose sites for their houses where ample space was obtainable and where fine trees already existed. Prevailing custom places fine houses on lots of land much too small for them, and many a mansion, architecturally excellent, is foredoomed to rise in some bare field where it must stand naked during many years. And yet, New England, not to speak of other parts of the country, abounds in accessible park-sites, crying to be occupied, where, if there is no such mighty river as the Hudson, there is great variety of lake, hill and mountain scenery adorned by fine trees and woods.

Boston. *Charles Eliot.*

The Art of Gardening.—An Historical Sketch.

XX.—The Mahometans in Spain and India.

THE Generalif,* a sort of summer-palace attached to the Alhambra, stands on another spur of the same mountain. The walk from one to the other may be traversed in about a quarter of an hour, and leads through a ravine luxuriantly overgrown with Figs, Oaks, Laurels, Pistachios and Cystisus. The place, as Gautier described it fifty years ago,† wore the aspect of a virgin forest; but it was once a carefully tended pleasure-ground, like the approach to the Alhambra on the other side, where natural effects had been simulated with consummate art. Much of the architectural beauty of the Generalif has perished, yet its gardens and water-works still delight the eye. Gautier says: "A marble bordered canal runs the whole length of the enclosure, rolling its rapid and abundant waters under arcades of foliage formed by massive and fantastically shaped evergreens. Orange-trees and Cypresses are planted on either hand. . . . The perspective is terminated by a gallery-portico with fountains and marble colonettes. . . . The canal makes a sharp bend and you penetrate into other enclosures ornamented with pieces of water and surrounded by walls. . . . In the middle of one of these basins opens, like an immense bouquet, a gigantic Oleander of incomparable beauty and vividness. When I saw it, it was an explosion of flowers, a veritable bouquet of vegetable fireworks. . . . The waters reach the garden by a sort of very steep inclined plane, edged with little walls, supporting channels of great hollowed tiles, through which the stream precipitates itself under the open sky. At each break in the descent the water rises in abundant jets from the middle of little basins, pushing its aigrettes of crystal into the thick foliage of the Oleanders which lock their branches above. The mountain ripples with water; . . . always one hears close by the murmur of some rivulet which is being led to feed a fountain or to moisten the roots of a tree." Some writers say that this charming aqueduct was built as late as the time of Charles V.; but even if this is the case it represents a characteristically Moorish conception. The Oleander which so delighted Gautier is, according to others, not a single tree, but a massive group; its beauty, however, is always spoken of in terms as enthusiastic as Gautier's own. It is, indeed, one of the "sights" of Granada; and still more famous is another feature in the gardens of the Generalif, a group of very large and ancient Cypresses—"Los Cupressos de la Reyna Sultana"—which have a traditional connection with one of the most sanguinary scenes in Spanish history. Every one has heard of the "massacre of the Abencerages," a royal Moorish race; and it was precipitated by the fact, we are told, that in their trysting-place, beneath one of these huge Cypresses, a Christian king had surprised his wife with a Moorish prince.‡

Looking down from the gardens of the Generalif on one side "the hill disappears under an ocean of verdure," while on the other there rises at a little distance a burnt, bare mountain throwing the more fertile scenes into incomparable relief.

In speaking of a convent not far away, Gautier says that the ancient Moorish garden had fallen into decay and wildness, but that he found an alley paved with white marble, flanked on each side by a long marble bench with a curved back, overarched with Oleanders of enormous size, and showing at the end of its long vista a magnificent panorama of the Sierra Nevada Mountains. This verdurous archway, with its marble *mastabah*, vividly recalls a description in the "Arabian Nights" of the approach to Haroun-al-Raschid's "Garden of Delight" at Bagdad; and the fact is of interest as showing the essential identity of Saracenic ideas in all the widely separated lands where they found expression.

If the great palace at Zahra, near Cordova, built about the year 1000, still existed "we could afford to despise the Alhambra,"§ which represents a later and less admirable phase of Moorish art. The enclosing walls of this palace measured about 4,000 feet in one direction and 2,200 in the other. Like most Oriental buildings of the kind it consisted of a great number of apartments scattered about in gardens; and so rich were these gardens in marble kiosks, fountains and ornaments of every kind, as well as in plants and flowers, that "they may well have surpassed in cost and even in beauty" the buildings themselves, despite the 4,300 columns, the gilded roofs of cedar, the inlaid marble floors and the brilliant friezes of which the old historians tell.

Warlike tribes from central Asia early appeared in the west Asiatic provinces ruled by the Mahometan khalifs, Tartars coming first and Turks or Mongols later. They embraced the religion of the land and served for a time in its armies, but growing in numbers, they gradually gained one district after another for themselves. Before the middle of the thirteenth century pretty much all the ancient kingdom of Persia was in the hands of Ghengis Khan. His empire fell apart after his death, but a century later was consolidated by Tamerlane; and

*The name is properly *Ginat al arif*—"garden of the artist." The place was created by the architect of the Alhambra, who afterward sold it to the king.

†"Voyage en Espagne."

‡I venture to use the present tense in speaking of these trees, although I can find no recent account of their condition, and writers early in our century describe them as extremely old.

§Fergusson: "History of Architecture."

then came new streams of Turkomans, until the history of the country almost disappears in a tangled web of conflict.

But when we follow these same invaders into the Indian peninsula, we find that, while apparently destroying Persia, they had absorbed the life-blood of its art. From the eighth to the thirteenth centuries there were constant Mahometan inroads into northern Hindustan. But the existing "Pathan dynasty" at Delhi was disturbed by the attacks of the great Mongol conquerors, Gengis and Tamerlane, and was succeeded by a Mongol dynasty, under whose most famous prince, Aureng-Zebe, Delhi rose to its highest pitch of splendor. Now, these Mongol rulers, whose dominion spread over a vast portion of northern India, were akin in blood not to the Persians or Arabs, but to the Chinese. Yet in India they used a thoroughly Saracenic art in their splendid buildings, and in their beautiful gardens, too. Not a trace of "Tartar" elements appears in their mosques, tombs or palaces; and the stately symmetry of their pleasure-grounds is utterly unlike anything that we find in the Chinese empire.

New York City. *M. G. Van Rensselaer.*

New or Little Known Plants.

Paulownia Fortunei.

MR. HEMSLEY describes, in a recent issue of the *Gardeners' Chronicle*, a second species of Paulownia —*P. Fortunei*. This plant, it appears, was first collected by Fortune when he was in China, twenty or twenty-five years ago. His specimens, however, had no leaves and were confounded with *P. imperialis*.

"*Paulownia Fortunei* is readily distinguished from *P. imperialis* by its much elongated, heart-shaped, long-pointed leaves, glabrous and almost shining on the upper surface, with a very short and very dense whitish tomentum on the under surface. The flowers are longer and more curved, but I have no definite information of the color. The seed-vessel, too, is much larger than that of *P. imperialis*, as figured by Siebold and Zuccarini, but I have not seen a ripe one of the latter. So far as I know, *P. Fortunei* has only been observed, or at all events collected, in the two distant provinces of Kwangtung and Shantung, the actual localities being separated by about fifteen degrees of latitude. I have seen specimens of *P. imperialis* from Ningpo, which is situated on the coast about midway between the two places where *P. Fortunei* has been found, and Dr. Henry collected it in the central province of Hupeh, where, he notes, he observed it wild in various mountain localities. It is surprising that these two species should so long have been confused, though this probably would not have been the case had the common one proved a satisfactory ornamental tree in this country, and developed its full beauty. *P. Fortunei* produces its flowers early in the season, before or at the same time as the leaves; therefore we cannot hope that it will prove more suitable to our climate than *P. imperialis*."

In the neighborhood of this city *P. imperialis* is a familiar object, growing to a large size and adapting itself perfectly to our soil and climate. Further south, especially in some parts of Virginia and Carolina, it has become sparingly naturalized and is now found growing spontaneously among the indigenous forest-trees. It is probable, therefore, that the second species may thrive in some parts of the country at least.

Foreign Correspondence.

London Letter.

THE Daffodils may be classed with the Primrose, the Violet, the Wood Anemone and Hyacinth as typical English spring flowers. It is only within the last twenty years that the whole genus Narcissus has sprung into the very front rank as a popular garden plant, although Sir John Hill wrote in the year 1757 of the Poet's Narcissus: "The garden does not afford in its kind a prettier plant than this; nor do we know one that has been so early or so honorably mentioned by all kinds of writers." That the genus had attracted the attention of specialists long before what may be called the present revival of their culture is shown by Parkinson in his "Paradisus Terrestris," published in 1629, which contains figures and descriptions of nearly 100 kinds of Narcissus.

Although it is true that for a long time these plants were neglected by horticulturists generally, yet there have always been admirers sufficient to prevent their disappearance, and even to raise new kinds, so that few of those which Parkinson described have been lost. The attention of the present age has been directed to them by exhibitions, illustrated monographs and popular treatises upon their character and culture; probably also the fickle goddess Fashion has looked with favor upon them. Be the cause what it may, the Daffodils are now universal favorites, and where one grew them ten years ago a hundred grow them now.

The flowers rank second to none for decorative uses, and there are thousands of acres devoted to the cultivation of Daffodils for the supply of the London market alone. What flowers are best for the embellishment of rooms is a question which individual taste decides, but in my opinion there are no flowers, neither in summer nor autumn, nor yet amongst exotics, which excel the Daffodils as decorative flowers. They are abundant, they travel well, last a sufficient length of time; they are elegant, varied in color and in form, and many of them are deliciously fragrant.

If these plants are as popular in America as they are here all this is superfluous, but I am told that the passionate love of the English for Daffodils is peculiar to them. Messrs. Ware, of Tottenham, sent last year to the Paris Exhibition one of the finest collections of Narcissus-flowers ever shown, but, except *N. poeticus* and its varieties, it attracted little attention, and the exhibit was voted a failure!

The principal growers of these plants and the writers about them are Herbert Leeds, Backhouse, Nelson, Barr, De Graaf, Baker and Burbidge. Two of the very finest kinds—namely, Emperor and Empress—were chance seedlings raised by Mr. Backhouse. Leeds raised many beautiful crosses between the Trumpet and Poeticus sections, "which rival the choicest of all tropical Orchids in beauty, while at the same time they are perfectly hardy in our gardens." De Graaf has given us some magnificent seedlings, two of the very best being Beauty of Leiden and Madame de Graaf. In our opinion this last named is the most perfectly beautiful of all the Trumpet Daffodils. It is large, regular and elegant in form; the trumpet has an even, crisp, reflexed margin, whilst the color is soft, creamy white. Another sensational kind is Sir Watkin, the history of which is quite a pretty little romance. Its origin does not appear to be known. Its flower is of gigantic proportions, and its color is canary yellow with an orange-yellow trumpet.

In the face of the fact that there are no less than about five hundred named varieties of Narcissus, it is not easy to make a selection of a few which can be called the best of the lot. We have more names than distinctions; that is quite certain. The Royal Horticultural Society recognized this when they appointed, in 1886, a select committee to deal with the nomenclature of the genus. This committee still exists and finds plenty to do; more, in fact, than it can manage. Recently it has published a list of some fifty varieties of Narcissus which it considers are sufficiently well marked to deserve distinctive names. We had a great Conference and Exhibition of Daffodils in 1884, and another has just been held at Chiswick, extending over four days (from April 15th to 18th). The papers read at the Conference treated the botany, history, hybridization and crossing, the names and the cultivation of Daffodils of all kinds. With respect to the botany, that may be said to have been settled long ago by Mr. Baker, whose latest revision will be found in his recently published work on the *Amaryllidaceæ*. The history also has become an oft-told story. The only additional information yielded by the conference relates chiefly to matters of cultivation and improvement.

A paper on the cultivation of Daffodils for the supply of the London flower-market was read by Mr. James Walker, one of the most successful of those who grow flowers on a large scale. The gist of this excellent, practical paper was, in regard to soil, that a representative collection could not be grown well in the same soil. He planted a collection on a strong loam in 1881, and whilst some kinds increased fourfold in a year or two, others had died outright. He now divides his plants into two lots according as they prefer a heavy, well manured soil, or a lighter, less rich compost. He replants his bulbs every year, lifting them as soon as the leaves fade, drying and cleaning them, and replanting again in August and September, planting first those kinds which push new roots first. Mr. Walker insists on lifting, cleaning and replanting annually if first-rate results are expected. The kinds which he finds best for market purposes are:

TRUMPETS.—Emperor ("best of all"), Maximus, Golden Spur, Tenby and Spurius.

BICOLOR.—Empress, Horsfieldi, Grandis, Dean Herbert and J. B. M. Camm.

MOSCHATUS.—Of this white flowered group Mr. Walker did not speak highly, their flowers being too soft and not standing well enough for market purposes; he finds the following the best in this group, Mrs. Burbidge, Cernuus and Cernuus pulcher.

INCOMPARABILIS.—The best of all the many varieties included in this section is the giant Sir Watkin, and its nearest rival, Lady Watkin, of which Mr. Walker possesses the entire stock. Next to these he places Gloria Mundi and Princess Mary.

BARRI.—Maurice Vilmorin, General Murray, W. Ingram and Duchess of Westminister. The last named is large flowered, of excellent form and almost pure white.

BURBIDGEI.—The pick of this section Mr. Walker found in Constance, Falstaff, John Bain and Mary.

POETICUS.—All the forms in this section were, he said, of great value as market plants, whilst the best of them were Grandis, Recurvus and Poetarum. From the double-flowered kinds he selected Sulphureus (Codlings and Cream), Aurantius plenus (Butter and Eggs), and Telamonius plenus (Great Double Daffodil).

From this selection of kinds Mr. Walker is able to keep the market supplied with flowers from the end of January to the middle of May.

No one grows these flowers more perfectly or in greater numbers than Mr. Walker, who has close upon a hundred acres planted with them in his nursery near Petersham. His group of flowers at the exhibition was remarkable for its uniform excellence, not one of the hundred or so varieties it included being weak.

The principal exhibitor was of course Mr. Peter Barr, "King of Daffodils," as he is termed. Mr. Barr has done more than any one to bring Daffodils into popular favor, and he knows more about the cultivated forms than any other living man. He exhibited large groups of flowers of some two hundred named varieties and was awarded the gold medal of the Society. Kew sent flowers of one hundred and fifty named sorts. The great vinery at Chiswick was filled with the flowers, and presented a most beautiful picture, such as had never been seen in any one place before. *W. Watson.*

London.

Cultural Department.

Early Blooming Shrubs and Trees.

POSSIBLY on account of the unusual amount of snow on the mountain ranges west of the prairies our spring is late and but few ligneous plants are yet (April 25th) in bloom.

Of our indigenous shrubs under cultivation *Dirca palustris* (the Leather-wood) is first to expand its flowers, and our native Amelanchier (the Juneberry) follows closely and in advance of any of our varieties from Europe.

Of European and Asiatic plants some species of the Prunus family take the lead in earliness of bloom. A Manchurian Bird Cherry, *Prunus Padus*, expands its handsome foliage in advance of all our native and foreign species, and is now loaded with its really beautiful white racemes. As obtained from different parts of east Europe it runs into marked varieties. In beauty of tree and flowers a variety from Arel, in central Russia, excels all others I have yet seen.

Prunus virgata and *Prunus tomentosa* bloom with us at the same time, but are not equally hardy as to fruit-bud. While the tree itself is hardy enough, we rarely have the fine double flowers of the *P. virgata* in perfection. On the other hand, *P. tomentosa* is hardy in fruit-bud, and its blossoms will endure severe frosts.

The Siberian Apricot is now white with bloom, but it rarely fruits with us, as the flowers do not endure frosts or early spring storms as perfectly as do those of *P. tomentosa*, *P. Padus* and the Siberian Almond. In our climate the Siberian Almond (*Amygdalus Sibirica*) blooms with astonishing freedom and regularity. Three years ago it was loaded in early April with its pretty pink flowers during a frost that froze water an inch thick in a watering trough near it, yet the flowers were followed by a heavy crop of almonds, from which we grew hundreds of seedlings the next spring.

Of our collection of Barberries, *B. Thunbergii* and *B. Amurensis* come earliest into bloom, yet are not liable to be injured by frost or storms. *Forsythia suspensa* is now well laden with its yellow flowers, and, taken all in all, is the handsomest and best of its genus for our climate. Of the Elderberries, *Sambucus racemosa*, from Devil's Lake, Wisconsin, is in bloom with plants of this species from central Asia, while native individuals and those of west Europe are much later in flowering.

Of the Birches now in bloom, *Betula fruticosa* and *B. Gmelina* are the most interesting. The catkins are long, pendulous and peculiar, attracting much attention. Of the Willows now in flower, *Salix aurea*, of central Asia, is the most attractive. The long, yellow catkins, with the shining, half-developed foliage and bright yellow bark, give a pleasing expression not equaled by any Willow or Poplar in our collection. In the Pyrus family the wild Pear of the Altai Mountains is the most interesting. Its large, pure white flowers are in clusters at the points of growth, and form a fine contrast with the half formed silvery leaves. Worked at standard height on the common Pear of east Europe, *Pyrus salicifolia* forms one of our most desirable small trees of pendulous habit for the lawn. In a general way, I may add that eastern shrubs and trees of given species flower with us earlier than our indigenous plants. As an instance, *Prunus serotina*, from Massachusetts, blooms several days earlier than our native form of the species.

Agricultural College, Iowa. *J. L. Budd.*

Notes After a Mild Winter.

THE unusual mildness of the past winter in the eastern part of America has again demonstrated some things regarding the plants of our gardens which have not infrequently come under the notice of horticulturists. The almost uniformly mild temperature (not touching zero at Boston) of the entire winter has been very favorable to many herbaceous plants which are ordinarily considered tender or but half-hardy. *Anemone Japonica*, with very slight protection, was quite uninjured, and the short stems of the rather tender St. John's Wort, known in England as the Rose of Sharon (*Hypericum calycinum*), with little protection, show very slight injury. It is among some of the woody plants that the effects of the mild winter are most noticeable. Most remarkable is the fact that our native trees and shrubs are rarely lured by warm midwinter days into exposing their buds and blossoms to the frosts which suddenly and surely follow; but it is a common experience with many foreign species, natives of milder or otherwise dissimilar climates, that the flower-buds are pushed in mild weather beyond the limits of safety, and the result is that when spring comes the buds and half-opened flowers are dead. Here and there a few late buds escape and produce scattering flowers and perhaps fruit. In such cases one can imagine that the late blossoms developing into fruit might in the course of natural selection produce an acclimated race of the species; which having acquired the habit of late flowering, would not advance the buds too far until a comparatively safe season had arrived for expansion and development.

One lesson which has again forced itself on the attention of amateur planters is that soil and situation are often very important considerations affecting the vigor and endurance of some foreign plants. Even an exposed situation, where the soil is well drained, and not too rich, so that all parts of the plant become thoroughly ripened before autumn frosts, is apparently much more conducive to the hardiness of such trees and shrubs than when they are planted in rich, moist soil, where growth is continued until late in the season, and, in consequence, the plants are not fully matured and at rest before all activity is violently stopped by cold weather.

The Altheas (*Hibiscus Syriacus*) and the Weigelas are familiar plants which particularly illustrate the advantage of planting on a sloping bank or in a dry situation. In such positions they are usually as hardy as could be desired; but in rich, moist soils they are very liable to be killed to the ground. *Deutzia scabra* and its garden varieties and many species and varieties of Clematis are among the plants which are subject to severe injury in winter if grown in too wet and too highly cultivated situations. The buds of the tree Pæony (*P. Moutan*) are usually much advanced in the autumn, so that the leaves are plainly seen throughout the winter. These in some places have been killed, and it is noticeable that the injury is much less where the soil is warm and dry. The fragrant, early flowered, Asiatic Honeysuckles, *Lonicera Standishii* and *L. fragrantissima*, on low grounds lost most of their flower buds, and *Pyrus Japonica* sustained similar injuries except in much sheltered places. This plant, and the Honeysuckles to a lesser extent, are usually provided with some flower buds which are less advanced than the others, so that unless the stems of the plants are killed a few flowers are produced. The North American *Berberis* (*Mahonia*) *Aquifolium* is not a satisfactorily hardy plant about Boston; but here again a comparatively dry situation, added to a northern exposure with partial shade, gives the best result. Among plants which had many of their flower-buds killed

were the Forsythias, *Magnolia Lenné*, *M. stellata*, some Asiatic species of Prunus, and *Nuttalia cerasiformis* of the Pacific Coast. In all dry situations the Forsythias are as richly laden with blossoms as usual, but the buds were largely destroyed where the ground was wet, and similar effects were noted in comparing the early flowering small Magnolias.

On account of their precocious tendencies the pollen-bearing catkins of most of the foreign species of Hazels are usually destroyed before spring, and even the catkins of some of the exotic Willows shared the same fate during this mild winter. The frost did not penetrate far into the soil, and, coupled with the previous advantage of a damp summer, the past season was a very favorable one for the moisture-loving Rhododendrons and the Azaleas, and for the preservation of their flower-buds, although with few exceptions the buds of some extremely early flowering varieties were quite destroyed. With the protection usually given them, plants of *Calluna vulgaris* and allied Heaths appear to have suffered as severely this mild winter as they did in seasons with records of twenty below zero.

Arnold Arboretum. *J. G. Jack.*

within the last ten years, and it is in bloom now. The racemes, five in number, are pendulous, two to three feet long, and bearing from fifteen to thirty flowers, each of which has a drooping pedicel six inches long, bearing a pair of large wing-like bracts four inches from its base, the flower being four inches across, and composed of four spreading sepals, five unequal petals, three of them large, and in the position usually occupied by the standard in the flower of an ordinary Legume. The stamens are united at the base, and form a long curved tube. The color of the whole flower, bracts, pedicel and all, is the richest vermilion or vivid scarlet, with blotches of rich lemon-yellow and a faint bluish tinge on the standard-like petals. In habit and foliage the plant resembles Brownea or Jonesia. The temperature supposed to be essential to this plant is from seventy to eighty degrees, with a bottom heat of ninety degrees, but the Kew plant is growing in a house devoted principally to Aroids and Tree-ferns, along with the largest of which it is planted out in an unheated but well-drained bed of soil. The temperature maintained in this house in winter is sixty-five degrees in severe weather, whilst in summer it ranges from seventy to eighty-five degrees. This is

Hyde Park: Entrance Front.—See page 222.

A Few Greenhouse Plants.

Amherstia nobilis.—It is now fifty years since this magnificent plant was introduced from India into England. Its fame had become known from a description by Dr. Wallich, who found it in 1827 in Martaban, growing along with *Jonesia Asoca*, another splendid-flowered leguminous tree. Writing of the Amherstia, Wallich said: "The largest of the two trees I found was forty feet high, with a girth of six feet near the base. Both were profusely ornamented with pendulous racemes of large vermilion-colored blossoms forming superb objects, unequaled in the flora of the East Indies, and, I presume, not surpassed in magnificence and elegance in any part of the world." Many futile attempts had been made to introduce this plant into English gardens before the Duke of Devonshire sent a collector specially for it, and succeeded in importing and establishing a plant in the famous Chatsworth Gardens. This plant is still alive. But the Duke was not the first to flower the Amherstia, a small plant in the collection of Lady Lawrence, at Ealing, flowering first in 1849. The first raceme that developed was sent to the Queen, and the second to Kew for figuring in the *Botanical Magazine*. A plant now in the Kew collection—originally, I believe, a cutting from the Ealing specimen—has produced a few flowers on several occasions precisely what one keeps an ordinary stove at. Evidently, therefore, Amherstia may be grown and flowered in any house devoted to tropical plants. The Kew specimen is about ten feet high.

Aristolochia Goldieana.—In a genus remarkable for exceptional variety of form, size, color and odor, *A. Goldieana* is the most astonishing of all. It is the largest flowered of any known plant except the monster parasitic *Rafflesia Arnoldii*, which is peculiar to Sumatra; it is also very strong in form and very vile in odor. The tawny yellow or lurid purple color of the flowers and the possession of a strong disagreeable odor appear to be characters peculiar to all very large flowered plants, except, perhaps, the Victoria. Thus in *Stapelia gigantea*, the large Amorphophalli, *Godwinia gigas* and this Aristolochia we have these characters, namely, purple-brown and yellow, and an odor more powerful than pleasant. *A. Goldieana* was introduced into Britain in 1867, when a plant was received in Glasgow from the Rev. W. C. Thomson, a missionary in Old Calabar, who found it in flower "growing in a dry situation and surrounded with bush." This plant flowered in the Glasgow botanic gardens, and was figured in the *Botanical Magazine*, t. 5672. Probably all the plants of this species now in European collections are the progeny of this first introduced one. It has flowered several times within the last ten

years in botanical gardens, notably at Kew, where a plant of it is in bloom now. The root-stock of this species is rather woody and it bears thick fleshy roots not unlike those of Dahlias. The branches are annual, pushing into vigorous growth in early spring and perishing in the autumn. In winter no water is given. The Kew plant was repotted at the end of January into a ten-inch pot. It was then placed in the hottest and moistest house in a position close to the glass. The flower-buds, when the plant is strong enough to flower, are produced at the base of the new growth and they show almost as soon as growth begins. They develop very rapidly and when expanded they are in the form of the Dutchman's Pipe (*A. Sipho*), twenty-eight inches long from the base to the apex of the limb, with a constriction and sudden bend at about a foot from the base. From this bend the tube gradually widens upward until at the mouth it is sixteen inches across and is large enough to almost completely hide a man's head if put on as a hat. The three lobes are defined by three tails about three inches long. The color of the lower half of the flower is yellowish green, the upper half dull yellow ribbed and veined with purple on the outside, the inside being dull orange-yellow marbled with purple.

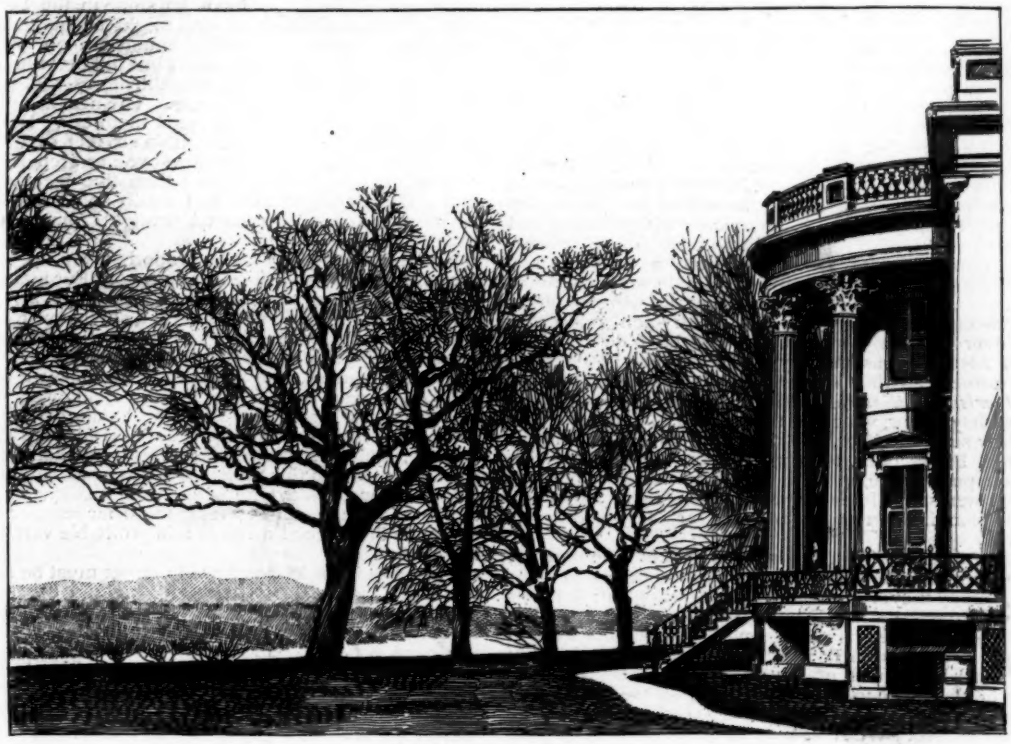
It is difficult to convey a correct idea of the plant by means of a description, but when seen it cannot fail to astonish even those who are well acquainted with plants. For botanical collections it is a splendid subject, and even in private gardens it is worth growing, the unpleasantness of its odor being more than counterbalanced by its wondrous size and form. It is easily cultivated, the only time when it requires extra care being for about a week when the buds are very small, as at this time the slightest check causes them to fall, when all chance of flowers for that year is gone.

Crinodendron Hookerianum.—Although a native of the American continent (Chili), and an old introduction into English gardens, I venture to recommend this beautiful-flowered greenhouse shrub to the notice of your readers as a plant worth the attention of every one who delights in distinct, elegant, bright-colored flowers. Veitch introduced it into England many years ago, and tried to grow it outside, but failed. *The Garden* published a colored plate of it about ten years ago, but still it remains a rarity in cultivation. A plant now flowering at Kew is one of the prettiest little objects. Imagine a Vaccinium-like plant, eighteen inches high, with sub-horizontal branches and pendent, axillary flowers, each on a stalk three inches long, and in form, substance and color not unlike the flowers of the pretty *Clematis coccinea;* in other words, the flowers are fleshy, arceolate, over an inch broad, and of the brightest crimson color. *W.*

Kew.

Notes on American Plants.

SEVERAL of the Dog's-tooth Violets (Erythroniums) are now in flower, but by far the most charming species we have seen is *E. Hendersoni*, which was described and figured in GARDEN AND FOREST, vol. i., page 317. The flowers of this plant have colors as rich and delicate as those of the Calypso. Of course there is nothing fantastic in their shape, as is the case with the Calypso, but in their way they are quite as pretty. The plants seem to be healthy in this climate. Ours were protected during winter with a covering of leaves, but we think that if the bulbs are set six or eight inches below the surface they would be perfectly hardy. Another interesting species from Oregon was sent us under the name of *E. Howellii*. This has smaller, light cream colored flowers, slightly tinged with red, with a yellow centre. Both species thrive in a loamy soil in open sunlight.



Hyde Park: River Front.—See page 222.

One of the most interesting Trilliums at this time of spring is the *T. sessile*. Not on account of its flowers, for they have not yet opened, but for its three large spotted green leaves. It seems to give the finest display of foliage of any of this genus. A bed of this species planted last August is now in full leaf, a solid mass of the deep green. Each plant has three leaves in a whorl, and on the finest specimens each leaf is fully three inches wide.

Erigenia bulbosa (Harbinger of Spring), now in flower, is a small and dainty little plant, seldom more than five inches high, with a tuberous root. Its flowers are in a compound umbel, small and white. It seems to like the shade, or at least to be slightly shaded.

Syntharys reniformis, from Oregon, is an early flowering plant. Its blue flowers are borne in a dense spike about an inch long by half an inch in diameter. The reniform leaf is notched around its entire margin. The plant grows only a few inches high and is quite interesting, not only on account of earliness, but for its foliage and flowers.

Corydalis aurea, a not uncommon biennial, is a valuable plant for cultivation. It forms large clumps or masses of its

fine pale green or glaucous foliage, four to six inches high, and often more than a foot wide. At this time of spring, half hidden among its foliage, may be seen its pretty golden yellow flowers. These continue to appear until past midsummer. There are few of our native plants which, when brought to their highest state of development, are more attractive. A well drained loamy soil and open sunlight are what it needs.

Trollius laxus (Spreading Globe-flower) is an inhabitant of dark, shaded swamps. Its pale yellow flowers are about an inch wide, and come in early spring before many plants appear above ground. This earliness makes it interesting, for at this season a plant might attract us that would not do so a month later. It needs a moist, shaded situation.

Shortia galicifolia, now in flower, is a plant that would interest any one even if its history were unknown. The foliage is as fresh now as at any time, and the flowers, which are nearly white, or of a slightly creamy shade, are delicate and pretty, half an inch wide. The plant seems to prefer shade, or to be partly shaded. A fine, loamy soil suits it, and it is not difficult to grow.

Southwick, Mass. *F. H. Horsford.*

Hardy Plants for Cut Flowers.—III.

MOST gardens possess a sheltered corner that is well drained and warm in winter, and such a position should be utilized to plant a bed of Alstrœmerias. These beautiful plants are natives of South America, and belong to the *Amaryllidaceæ*, but do not receive the share of popular attention which they deserve. They flower without intermission for several months when well established and left undisturbed. We have tried three kinds—namely, *A. aurantiaca*, with bright orange flowers; *A. Chilensis*, with flowers of various shades of white, pink and yellow; *A. Peruviana*, with crimson and green-tipped flowers. Alstrœmerias have thick, fleshy, tuberous roots, which are produced from a creeping rhizome, and these penetrate deep into the soil in search of nutriment and are usually secure from frost in mild winters, but in severe seasons it is best to place some dry non-conducting material over the plants after they have died down. The flowers of Alstrœmerias are very showy, and are produced in terminal umbels, and last long when cut or on the plants.

Of *Anthericum Liliastrum* there has recently been introduced a variety Major, which is the best of all Anthericums. It is an early summer plant, and dies down after flowering as the Oriental Poppy does, to reappear early in spring. The flowers are pure white, more than an inch across, borne on stout, erect stems, and in every way adapted for house decoration. The plant is often known as St. Bruno's Lily, and is perfectly hardy.

The graceful habit of Aquilegias, the length of time they last in bloom and their hardiness are all strong points in their favor; it is a pity they are not more durable when cut; but their profusion compensates for this in a measure, and certainly a garden of hardy flowers is not complete without the Columbines. It is well known how prone Aquilegias are to mix, but we have long kept three of the best native species true by gathering the first seed to ripen and cutting off the last flowers of *A. Canadensis*, *A. cærulea* and *A. chrysantha*, which flower in the order named. We shall have to adopt some other plan in the future, owing to the introduction of some twenty aliens. A word should be said for the Munstead Giant, a fine, pure white strain of the old *A. vulgaris*, the best white variety for cutting, owing to the stout, erect stems, which are two to three feet high.

The Spiræas deserve notice, for all are useful, though some more so than others; *S. astilboides* is one of the best, and is of recent introduction. It has dense spikes of white flowers similar to those of *Astilbe Japonica*, but it is quite distinct and taller in habit. It is pleasant to record that what was once almost a craze for *Spiræa palmata* is dying a natural death in favor of *S. lobata*, a native plant, known as Queen of the Prairies, which is quite as beautiful as the Japan plant, with fragrant flowers, and with a constitution that will ensure its thriftiness in any position. The double flowered form of *S. filipendula* is useful also, and is much more durable than the single variety.

It is rather surprising that people plant year after year seeds of the annual Candytuft when they could plant a perennial species and always have something green to rest their eyes upon, for all perennial Candytufts are evergreen. *Iberis sempervirens* is now a mass of snowy blossoms; *I. Garrexiana* comes next, and then *I. corræfolia*, the largest flowered kind, after which *I. sempervirens* commences to flower again, which it will do sparingly until fall. *I. Gibraltarica* has handsome foliage and flowers, but, unfortunately, it is not hardy here, though it is valuable for cutting when protected in winter. These hardy kinds of Iberis succeed best under the let-alone system, for when once planted they do not care to be disturbed, and soon form dense masses of foliage.

Passaic, N. J. *E. O. Orpet.*

Orchard Experiences.—IV.

HOW to set out Apple-trees has been a subject of discussion for a great many years, and yet many who have written upon it have failed to lay down definite principles of work, or to go into details in a practically instructive way. It has been shrewdly said that a physician is worth more to his patients for what he forbids than for what he prescribes. Very much the same might be said of our horticultural teachers. There are many superstitions about tree-planting that are hurtful in themselves, or because they divert attention from things essential. Some planters are very particular that the young tree should be set exactly as it stood in the nursery, as regards the points of the compass. Others have a notion that the roots must be kept near the surface, and they try to insure this by placing a flat stone in the bottom of the hole. Many beliefs of this kind might be quoted, all of little or no importance, and usually founded upon tradition or on the practice of men really expert but full of "notions."

The first essential is to have healthy trees, with a good supply of healthy and unmangled roots. The next is a proper place, properly prepared, in which to set them out. Hard-pan land, or land underlaid with ledge within six feet of the surface, is fatal to success. One of the finest young orchards I ever saw was set out over rock not more than five feet from the surface. It grew thriftily, but had hardly come into full bearing when a summer of unusual drought almost entirely destroyed it.

Not only are healthy trees, properly taken up, essential, but the selection of varieties is no less so. For a family orchard of small size fancy may be allowed to guide, but a commercial orchard must be selected with a single eye to the marketableness of its crop. Standard market sorts are what the commercial grower must have. The soil has to be considered, because some valuable sorts are grown to perfection only on certain soils. The Yellow Bellflower is worthless almost everywhere except near the banks of rivers, like the Kennebec, the Connecticut and the Hudson. The Roxbury Russet requires, for its full perfection, a soil charged strongly with iron. When this variety is set in rows running out from a ferruginous soil to one of different quality, its fruit immediately shows the change, being there far inferior in size, and defective in the chief merit of this profitable variety, its keeping quality.

The holes in which trees are to be set must be large enough to take in the full length of the roots, and they need not be larger on any land desirable for an orchard, which should be naturally or artificially well drained. On a well grown tree the roots are commonly more or less in whorls, one above another; and these should be spread out separately, beginning at the bottom. Every root must slant downward to its tip, which should be smoothed with an undercut where bruised by the spade in digging. The hole ought to be gauged as to depth, so as to leave the tree, when set, not more than an inch deeper than it was in the nursery; and the earth should be carefully and firmly compacted about every root to its end. Trees thus carefully and firmly set require no watering, and the use of water in setting is objectionable, as interfering with the proper compacting of the soil by the hands. The feet should be used for this purpose only after all the roots have been placed and covered; and in treading remember to keep the toes pointed directly toward the stem of the tree—otherwise roots will be broken, and sometimes torn off.

Staking is necessary only when the trees are tall, with thick heads; and these trees are not so good as smaller and younger ones, which need no stakes. Mulching, however, is of great service. A good mulch will double the rate of growth in a young orchard; and I have found it profitable to grow Beans in my young orchards in order to have the straw for mulching. Bean-straw will not be blown off by the wind, it decays slowly, and when decayed is a powerful fertilizer. If one begins with mulching, however, it must be continued as long as the orchard is kept under tillage, for it keeps the feeding roots of the trees quite near the surface. Another incidental advantage of a Bean-straw mulch is that it is not nearly as easily fired by accident, and if fired it burns slowly, and is easily extinguished by throwing earth upon it.

It is well known that many otherwise valuable varieties of the Apple have a tendency to suffer in the bark on the side

next the sun at its hottest—when a little past the meridian. The bark becomes hardened so as to interfere with its growth by compression, and sometimes it is killed outright. It has been advised to attach a slip of board to the trees on that side; but another way is to lean the tree in setting a little to the west of south, and also to encourage the growth of a few short branches low down on the same side. It is, of course, better to select varieties not so sensitive to the sun's action, or to use such sorts for stocks, to be top-worked. It is well to know and remember points like these, for success with an orchard requires a wide and various knowledge of all the needs and peculiarities of the fruits we want to grow. Probably the larger part of all the orchards planted fail of profit because their proprietors have not an adequate knowledge of the minor details which are essential to successful management.

Newport, Vt. *T. H. Hoskins.*

Seasonable Hints.—Many vegetables which are highly esteemed in Europe are comparatively unknown in American gardens, partly because they are not so easily cultivated in our climate, but mainly because they have not been more widely tried. Globe Artichokes, Sea Kale, Cardoon, Endive, Fetticus, Celeriac and such herbs as Tarragon and Borage would make welcome additions to the supplies of many a country home where now they are never seen. Seeds of the Globe Artichoke may still be sown, although this should have been done a little earlier. The young plants should be thinned out so as to give room for full development, and should be transplanted the following spring to permanent beds, in rows three feet apart and three feet apart in the rows. It would be better now to secure a supply of young plants and thereby save a year. In any event, they will not bear much the first season, but afterward they will produce a fine crop for years, although it is better to renew the plants every two or three years. They need a covering of coarse litter in the winter, as they are rather tender, and they should be set in a comparatively dry spot, as they are liable to rot from undue moisture. In June they begin to produce flower-heads, which should be gathered before they open, and when properly served will be found a great delicacy. Seeds of Cardoon may be now sown very thinly in rows three feet apart, and thinned later to eighteen inches between the plants. With ordinary cultivation the leaves can be tied up by the latter part of August, to promote a perpendicular growth, and then they should be earthed like Celery. The plants can be preserved for winter by trenching as for Celery, and they make fine flavoring for soups and salads. Endive is extensively grown by German cultivators, but is rarely seen in the gardens of amateurs. The seeds may be sown any time before July 15th, and the plants should be transplanted into beds about one foot apart each way. The simplest way of blanching them is to set boards along the rows when they are about half grown. The curled varieties make ornamental garnishing for various dishes and the broad-leaved variety is highly esteemed as a salad. The seeds of Celeriac should be sown at once, and as soon as of sufficient size, the plants should be set in rows eighteen inches apart, with six inches between the plants. They require slight earthing up, and by November will have formed bulbs like a small turnip, which is the edible part of the plant. About this time they should be dug up, and placed entire in shallow trenches, with but a small portion of the top appearing above the surface, and over this straw may be laid as cold weather sets in. The sliced roots make an admirable salad, and when grated dry, are useful for flavoring the finest soups. Plants of Tarragon should be secured at once and set in a sheltered situation. The young leaves are not only useful for flavoring in cooking, but when placed in vinegar they make a palatable and appetizing condiment. The blue flowers of Borage are not only ornamental, but they are much sought by bees for the abundant nectar they yield, while the aromatic leaves are particularly valuable as flavoring for salads, cooling drinks and light wines. The seeds may be sown now, and transplanted into rows eighteen inches apart and twelve inches apart in the row.

Bergen, N. J. *P. O.*

Magnolia Kobus.—It has been said of this Magnolia that it does not flower until it reaches a large size. At any rate, the behavior of a large specimen here warrants the belief that it is most unsatisfactory in its flowering. It is one of the finest specimens in this neighborhood, being fifteen feet high and sixteen feet broad at the base, and fully developed on every side. It has been growing in its present position twelve years. Until three years ago I never noticed a flower on it. It then had two. The next year it had the same number; last year, four or five; this year, one. The white flowers come before the leaves, but they are small and are not sweet-scented. As a large, finely formed shrub it is unexcelled, but sadly disappointing in its flowers. It is often called *Magnolia Thurberi* in American gardens.

Fothergilla alnifolia.—This shrub is rarely seen in collections, but it is valuable for its beauty at this time of the year. It forms a bushy shrub, with Alder-like, small leaves. Early in the season, before its leaves expand, it is clothed with heads of white flowers. They are clustered together in a dense spike, not unlike a small bottle brush. It is so distinct and pretty that it should be better known.

Corylopsis spicata.—This is another good thing now in flower, but a new one, comparatively. It also flowers before the leaves appear. The pendulous racemes of yellow flowers on the hazel-like stems give it a character unlike any other shrub. It will be valued as one of the first of shrubs to flower in the spring, and because of its thriving in any ordinary situation.

Germantown, Pa. *Joseph Meehan.*

Recent Publications.

Forestry in North America.—I.

A Manual of Forestry. By William Schlich, Ph.D. Vol. I. London: Bradbury, Agnew & Co., 1889.

It may be doubted whether this book will find many readers in the United States at present. The forest question at this distance seems as hopeless as ever. We read of forest-fires which destroy immense areas of magnificent woods, and the wholesale cutting of timber. Laws, it is true, have in some states been enacted to prevent the destruction of forests by fire, but in most instances they have remained a dead letter. The Federal Government, as well as some of the states, own extensive areas of forest-land, but these areas are diminishing rapidly by encroachments, and timber speculators find means to cut and lay waste the public forests.

Excellent treatises have been published to show that, if the present waste is continued, the difficulties will be serious, that in the drier districts, if the forest on the hills is destroyed, irrigation will be impossible and agriculture will suffer. Eloquent speeches on the forest-question are delivered at the meetings of the American Forest Congress and at local forestry associations. The practical effect of all these efforts has hitherto been insignificant. The matter seems perfectly hopeless and those who work the forests at present are not likely to be influenced by Dr. Schlich's Manual.

And yet the matter is not hopeless. Facts are stronger than arguments, and the facts are on the side of those who urge that forest-operations must be conducted on a methodical plan. What, then, is the essence of good forest-management? Simply this, that forests shall be treated in such a manner that they shall furnish, not huge masses of timber all at once, but a steady, and, if possible, increasing yield every year. The growing stock of trees, which is the accumulated wealth of centuries, must not be destroyed, but must be made to reproduce itself continuously, and to yield interest in the shape of annual cuttings.

Other countries have been in the same position in which North America finds itself at the present time. In other countries, also, there has been thoughtless destruction of accumulated forest-wealth. It has given way to a methodical system of working, which, in the long run, has been found to be far more profitable than the old system of wholesale cutting. When in British India measures were taken in 1856 to assert and to enforce the rights of the state in the Teak-forests of Pegu, and to substitute a regular system of management for the old practice of cutting down everything that was salable, the timber traders and other merchants of Rangoon raised an outcry of indignation. What they demanded was permission to cut whatever suited them. Teak-timber at that time commanded a high price, the merchants offered to pay liberally for permission to cut, and they argued that it was better to accept the revenue that would thus be realized, than to attempt the hopeless task of making the forests produce a permanent annual yield of timber. Iron, they added, would take the place of wood in ship-building, the demand for Teak would diminish, and ere long it would be a drug in the market. A brisk timber trade during a series of years, while Teak still commanded a high price, would greatly stimulate the development of Rangoon, while the growth of that town would be impeded by the refusal to comply with their demands.

Such were the arguments of those who opposed the adoption of a methodical system in working the Pegu forests. Large and important interests were at stake and their arguments seemed unanswerable. The forests were the

property of the state and it rested with the Government to say what was to be done. The influence of the mercantile community was great, and for a time their arguments prevailed with the Government at Calcutta. Orders were issued to open the forests to private enterprise. Fortunately these orders admitted of delay, and after a time wiser counsels carried the day. In this manner has it been possible to carry out the scheme of working the Teak-forests of Pegu upon a systematic plan.

The result has been favorable beyond all expectation. Ever since 1856 the Teak-forests of Pegu have yielded a large annual out-turn of timber, increasing in quantity as well as improving in quality, and at the same time the demand for Teak-timber has risen steadily. This has stimulated the export from other ports. The quantity of Teak-timber brought into the market from all sources has increased enormously since 1856, and yet, owing to the increased demand, prices have remained high. The trade has benefited largely and the growth of Rangoon has been rapid and steady beyond all expectation. In 1856 the Teak-forests of Pegu were not closed. The full quantity of timber, which their condition justified, was cut and exported annually, but the work was arranged in such a manner that their productive powers were not impaired and that the capital value of these estates was increased instead of being diminished. Lastly, Government has derived a large and steadily increasing annual income from this source. This was a point of vital importance. A new scheme had been carried out in the teeth of great and powerful opposition, and there was good reason to apprehend that unless revenue was produced the new scheme would not be permitted to continue.

As it was, the experience gained in Pegu acted as a powerful stimulus to systematic forest-management in all provinces of the large British-Indian Empire. Here, as in Pegu, the duty of taking action devolved upon the state, and the government is now reaping the reward of these measures in the shape of a large and steadily increasing annual forest-revenue and a large and steadily growing capital value of its forest-domains. The success attained in the management of the Government forests has induced native princes and large landed proprietors to follow suit and to manage their woodlands in a similar manner.

If it once comes to be understood in America that good forest-management does not mean the closing of the forests, but working them with moderation and on a definite plan, that forest thus managed is a permanent and valuable investment, then, not the state only, but private proprietors also, will commence managing their woodlands in a methodical manner, instead of allowing them to be ruined.

In a late issue of one of the leading German forest-periodicals, Wilhelm Kessler, a Prussian forest-officer, gives an account of his journey through the forests of Mexico and the United States. He describes a large forest of the Monterey Pine on the coast of California, which is carefully protected by the proprietor. Again, in a remarkable and most interesting book on the forests of North America, just published, the author, Dr. Heinrich Mayr, now Professor of Forestry at the Imperial Forest School of Japan, mentions his rides through large areas of virgin forest, kept in reserve by timber speculators and carefully protected until their turn comes to be cut down. Here, then, we have the first beginning of regular management, consisting in protection and successive cuttings. The second step is thus to arrange matters that on the places where cuttings have been made, young forest, consisting of the valuable species, shall grow up, so that when the last piece of the old forest has been cut down, a sufficient area of second growth with timber of the kind and size required may be ready for cutting. These arrangements will be facilitated by the great reproductive powers which some of the more important American forest-trees possess. In that portion of his book which treats of the forests in the Atlantic region, Dr. Mayr gives an account of the manner in which the White Pine (*Pinus Strobus*) reproduces readily from self-sown seed, wherever climatic and other conditions are favorable for its development. Regarding the Douglas Fir, the author states facts which show that under favorable conditions complete forests of second growth are produced from self-sown seed. Wilhelm Kessler, in the paper quoted, states the same for the Yellow Pine (*Pinus ponderosa*). Hence it will be possible, if due care is taken in arranging the cuttings and in the subsequent treatment of the forest, to secure the regeneration, by self-sown seed, of valuable woods. To this primary object the attention of all those who are engaged in forest-operations in North America should be directed. It is only by actual experience and by series of experiments conducted on a regular system that the question can be solved, how cuttings should be arranged and what treatment should be adopted in order to produce a complete crop of young trees of the particular kind desired. Such arrangement of cuttings and such system of treatment will, as a matter of course, be different for each kind of tree, and will also differ according to soil and situation. Nor will it be feasible in all cases to secure a renewed crop from self-sown seedlings alone. Nature must be assisted in various ways, by hoeing the ground or otherwise, and in many instances by sowing and planting, in order to attain the object aimed at.

To these matters the labors of foresters in Germany, in France and in other countries of Europe have long been directed, and the result has been that in these countries the art of managing forests has gradually developed into a profession, analogous to the profession of law or of medicine. The fundamental principles of jurisprudence are as plain and as easily intelligible as the fundamental principles which underlie the profession of a forester. The application of these principles, however, is a difficult and complicated business. Just as it requires much study to master the profession of a lawyer, so it is with forestry. Again, just as the profession of medicine is based upon many branches of natural science, such as chemistry, physics, anatomy and physiology, so also an efficient forester ought to be at home in mathematics, botany, chemistry, geology and other exact sciences.

Evidently, therefore, manuals are needed to facilitate the study of forestry, and the work of which the title appears at the head of this article is the first comprehensive manual of forestry that has appeared in the English language. The author, Dr. William Schlich, is one of two German forest-officers whom the writer, while Inspector-General of Forests in India, was permitted to engage for the Indian Forest Service. Before going out to India in 1866, Dr. Schlich had passed the examinations for the superior forest-service in his own country (Hesse-Darmstadt), he had been the pupil of one of the most eminent professors of forestry in Germany, the late Gustav Heyer, and he held a distinguished place among his fellow students. In India he was designated at an early date for important positions; he served successively in several provinces until he rose to the post of Inspector-General of Forests. This important position he consented to relinquish in 1885, in order to take up the appointment of Principal Professor of Forestry at the English Forest School which it had been decided to form in connection with the Royal Indian Engineering College at Cooper's Hill.

The first volume of the Manual contains the general and introductory part; in a second volume the author proposes to set forth in detail the different silvicultural operations; while the protection of forests, the utilization of timber and other forest-produce, the systematic arrangement of the plans for working and the financial aspect of forest-management will complete the work. Not the least of the advantages which will be gained by the publication of this Manual will be to settle the English forest terminology. When methodical forest-management was begun in India some thirty-four years ago, it was necessary to devise terms for matters connected with the treatment of forests for which, at that time, no convenient expressions existed in the English language. The technical terms which then were tentatively used, may now, through the publication of this Manual, be expected to receive general currency, while in some cases more suitable terms will be substituted for those originally used.

Bonn, Germany. *D. Brandis.*

Correspondence.

Hardy Plants at Short Hills, New Jersey.

To the Editor of GARDEN AND FOREST:

Sir.—A few days of genial weather has brought rapidly forward the early spring flowers, and I found in Messrs. Pitcher & Manda's nursery many interesting plants in bloom. The hardy plant department of this establishment is at some distance from the greenhouses, on the main road near the railroad station, and the situation is well adapted to such a nursery, being rolling ground with various exposures, and sloping at one point to a small stream. One notices, on entering the grounds, that a long, wide border has been made along the highway and filled with an assortment of plants for the benefit of the public. Varieties of *Phlox subulata* (Moss Pink) brightened up the beds near the entrance with masses of flowers which entirely hid the foliage. Excellent plants for spring carpeting they are, though some of the reds are not quite pleasing. A Phlox of more recent introduction is the white

P. Stellaria, dwarf in habit and not so compact in bloom. The first flowers of the Iceland Poppy (*Papaver nudicaule*) were just expanding. This dwarf Poppy is a gem, but it is apt to exhaust itself by profuse blooming, so that it cannot be considered a true perennial. It is best treated as a biennial for early bloom. If sown early in the year it will bloom in late summer and again in the following spring. The single flowers are white, yellow and orange. The well known white-flowered *Arabis Alpina* is here growing finely in a level border, though usually considered at home on the rockery. *Hepatica triloba rubra* has a color effect similar to that of the reddish Pink (*P. subulata*). *Myosotis elegantissima*, a variety of *M. alpestris*, is compact, with light blue flowers. *M. sylvatica compacta* has the compact habit and the yellowish foliage dear to the lover of variegated things. Varieties of Doronicums in bloom show that *D. plantagineum*, var. *excelsum*, is far away the best of the family and one of the best yellow Composites. Harpur Crewe, before noted in GARDEN AND FOREST, is a garden variety of this species. *Dodecatheon Meadia* and the rose-flowered *D. Jeffreyi*, *Anemone patens Nuttalliana*, *Viola cucullata* and its white variety, the lovely little *Iris cristata*, and *Stylophorum diphyllum*, the Celandine Poppy, were a few native plants worthy of any border.

Lovers of Aquatics will be interested in a *Caltha palustris* with a large, very double Ranunculus-like flower. *Helonias bullata* is not one of the most attractive marsh plants; but its rosy purple spike of flowers is rather interesting. Among the Primulas in bloom was a good strain of Polyanthus, *P. Auricularis*, *P. farinosa* and *P. Peyritschii*, the latter a hybrid between *P. auricula* and *P. viscosa*, a deep rosy flower with a white eye. *Epimedium macranthum* is a charming Barrenwort, as seen blooming here in young plants; the stems delicate, foliage pleasing and white flowers very attractive. A marked contrast is *Geum triflorum*, with its scapes bearing three purplish red, closed flowers—a native curiosity. The white *Orobus vernus* and violet-blue *O. lathyroides* are two good spring Vetches. Other plants noticed in bloom were a double *Cardamine pratensis*, the Cuckoo Flower; *Iberis Gibraltarica*, the perennial Candytuft (is this reliably hardy here as reported lately in GARDEN AND FOREST?); *Corydalis nobilis*; *Stellaria Holostea* (Satin flower), white flower, neat foliage; *Veronica repens*, dwarf, deep blue flowers; *Ajuga alpina*, a neat rockery plant; *Iris nudicaulis*; *Pulmonaria officinalis* and *Polemonium reptans*, two good old border plants; *Actæa spicata*; *Wulfenia fragrans*; *Arnebia echioides*, with showy yellow flowers; *Glechoma hederacea*, var., a neat, creeping plant with violet flowers, and useful in baskets, etc.

It was a pleasure to find such a variety of good flowers where, of course, no effort is made to show blooms, and to hear that the demand for hardy flowering plants is increasing; but it is to be feared that the demand is not a tithe of what it should be and must become when these attractive plants are more generally made known; and, it may be added, when the average gardener ceases to turn over every border in April and grub out all plant-life. The railroad to Short Hills runs through miles of our most populous suburbs, and is lined with handsome, detached villas, evidently the homes of country-loving, prosperous people. I had the curiosity to look from a not very fast running train for some color from hardy flowers, but in all the distance from the city, with the exception of the blossoming fruit-trees, a few shrubs and a patch of *Phlox subulata* in a graveyard, not a glint of color from a hardy plant could be seen, though miles of well kept grounds were open to view. This seems to tell a pretty plain story about the limited distribution of spring-flowering plants.

New York. *G.*

About Grafting.

To the Editor of GARDEN AND FOREST:

Sir.—I entirely agree with Mr. Burbidge when he says (page 158) that "Mr. Parsons does not go quite to the bottom of this question of grafting." There are many aspects of the problem which I should like to see illumined, and I was disappointed because Mr. Burbidge did not think it worth while to throw any new light upon the subject. He simply asserts that we do not know that grafting fruit-trees is better than growing them on their own roots, because the two processes have never been tried side by side. Of course, by the same reasoning, we do not know that the trees on their own roots are better, and until Mr. Burbidge proves that they are, it might be prudent for him to modify his absolute condemnation of grafting. If Mr. Burbidge proves anything by the assertion that "Nature is ahead of the most successful gardener, and she does not graft her productions," he proves too much, because the same argument would condemn layering, growing from cuttings, and even the transplanting of seedlings, for Nature does none of these things. And what is the bearing of the statement that the Seckel Pear was not grafted, but was a chance seedling? Has any one advocated grafting as a means of securing new varieties? If we assume that Nature produced the Seckel Pear this means that out of the millions of natural seedlings one individual has proved of supremely good quality. But how long would it take Nature to produce an orchard full of Seckel Pears? If the variety had not been perpetuated by grafting and budding, Mr. Burbidge would probably never have tasted one. But as a matter of fact Nature did not produce the Seckel Pear. The seed from which the tree sprang was undoubtedly produced from varieties which man had been improving for centuries by selection and perpetuating by grafts.

Flushing, L. I. *S. B. Parsons.*

A Large Purple Beech.

To the Editor of GARDEN AND FOREST:

Sir.—In your issue of May 8th, 1889, there was an interesting article upon a noteworthy Purple Beech upon the Lyman Place, Waltham. In that article it was said: "It would be interesting to know if there are large or very fine specimens of the Purple Beech in the neighborhood of this city or Philadelphia." A few days since I visited a Purple Beech on the grounds of Mr. Wm. H. Dyer, of Johnston, Rhode Island, which is certainly a fine tree. The tree was set in its present location in 1829 by the father of the present owner, Mr. Daniel P. Dyer, who was one of the pioneer tree-growers of this state; and he beautified his own grounds, as well as those of many of the fine old estates of Providence and vicinity, with some of the choicest kinds of trees which will grow in this climate.

The Beech alluded to is notable for its symmetry, presenting, in leaf, an almost perfect mound of dark purple foliage. Its dimensions, as ascertained by careful measurement, are as follows: Spread of limbs in two directions, nearly right angles, seventy-four and sixty-eight feet respectively; height, fifty feet, nearly; circumference of bole, three feet from the ground, ten feet four inches. At five feet from the ground, where the main stem divides into three parts, it is eleven feet in girth.

The tree is now in vigorous condition, and promises to grow much larger if it does not split apart at the place of its triple division, where it is now secured by iron bolts.

Near by this tree is a beautiful Cut-leaved Beech of large size, and a *Cladrastis lutea*, forty or more feet high, and of wide spread.

Providence, R. I. *L. W. Russell.*

Evergreens Destroyed by Fire.

To the Editor of GARDEN AND FOREST:

Sir.—All persons do not realize that evergreen-trees are very liable to injury from fire when grass, leaves or other litter is permitted to burn in their vicinity during a dry time. Last spring a fine Norway Spruce hedge on the farm of the Wisconsin Agricultural Experiment Station was accidentally set on fire from a mass of burning leaves in the neighborhood, and before the fire could be extinguished several rods of the hedge were totally destroyed. The heat created was sufficient to seriously damage some fine shade-trees that were standing near. Last October, while visiting the orchards of Mr. A. G. Tuttle, of Baraboo, Wisconsin, I saw several fine groups of evergreens on his grounds suffer total destruction from fire through the ignorance and carelessness of some of his men who had been instructed to burn some brush in the vicinity. The fire ran through the partially dried grass that covered the ground about the trees, and as it approached their trunks, the dry needles beneath the trees, being resinous, burned so vigorously that the lower branches were ignited, and in a moment the fire crept up the trunk to the top of the tree, where tongues of flame rose higher than the tallest shoots. Whole groups of Norway Spruces, Balsam Firs and Scotch Pines, nearly or quite twenty feet in height, were destroyed in a moment by a roaring conflagration.

University of Wisconsin. *E. S. Goff.*

Notes.

The shipment of California wines to New York for this year amounts to 150,000 gallons.

A winter-garden has recently been added to Craig-y-nos, Madame Patti's castle in Wales, at a cost of $20,000.

The cable announces the death of Mr. Hugh Low, the senior member of the successful London nursery firm of Hugh Low & Sons, large importers and dealers in Orchids.

Carnations have been scarce and high priced during all of the late flower-season. They have ranged in price from $2 to $2.50 a hundred, when generally they are not over $1 or $1.25 a hundred.

In those portions of Spain where the Cork Oak (*Quercus Suber*) is abundant, it is said that the peasants use the cork to line their houses. Naturally it is an effectual protection against dampness.

Contrary to general prediction the season has proved an uncommonly productive one for Maple orchards in some states. A correspondent of the *Country Gentleman* estimates that the yield of Maple Syrup in the Western Reserve will reach 600,000 tons.

According to a Mahometan legend, Eve picked a four-leaved Clover as she was driven from Paradise. But the angel's sword touched her, and its leaves were scattered. One of them fell within the garden, while the others were blown outside. Hence the rarity of the four-leaved form and the luck which attends its discovery.

One of the recent introductions of Monsieur Lemoine, the famous horticulturist of Nancy, is a variety of Heliotrope which foreign journals declare to be more nearly white than any previously known variety, including the White Lady. It is a hybrid between *Heliotropium Peruvianum* and *H. incanum*, and has been named "Fleur d'été."

In many Austrian provinces the Christmas Rose (*Helleborus niger*) grows wild among the mountains, blooming in the month of February. But within the past few years such large numbers of the plants have been uprooted for exportation to other parts of Germany, to England and even to America that local journals deplore the prospect of its possible extermination.

The show of Tulips in the New York parks has been unusually fine this year. There have been no successors among them of the dull purplish flowers which prevailed last year, but a brilliant assemblage of clear red, yellow and white flowers. The circle at the Fifth Avenue entrance of the Central Park was especially gorgeous, and everywhere the blossoms appeared simultaneously and have lasted well.

The largest of the edible gourds tested by Dr. Harris is the Kampiyo, of Okayama, Japan, which grows a yard long and five or more inches thick, and in Japan reaches a weight of sixty or seventy pounds. The Japanese dry it before it is cooked; it may be sliced and fried like egg-plant, and is equal in flavor to a good squash. The plant is hardy, productive and without musk odor, and Squash bugs do not seem to be fond of it.

The *California Fruit Grower* says that a delightful syrup can be made from Watermelons by chopping them, pressing out the juice, and boiling it for several hours. The red coloring matter then coagulates, rises to the surface, and is skimmed off, when the juice remains "as clear as distilled water and of a pale amber color. Boiled a little longer, it thickens into a rich, fruity-flavored syrup, perfectly clear and the color of quince or apple jelly."

A writer in a German horticultural journal ventures the statement, for which he cites the authority of F. Cohn, that wild Grape-vines are sometimes found in the Maremma of Tuscany whose stems measure more than three feet in diameter, and adds that they can be found of still larger size in the Caucasian Mountains. The largest Grape-vine in cultivation, the famous one at Hampton Court, is only thirty inches in circumference at three feet above the ground.

We have already noticed the manufacture of cloth from Pine-needles as a promising young industry in some of our southern states. A correspondent of the *Atlanta Constitution*, writing from Wilmington, North Carolina, says that at a factory in a neighboring village may be seen specimens of colored mattings made from the "Pine straw," which are excellent in quality and also attractive in appearance, as the straw can be bleached to a fine creamy tint and readily takes brilliant dyes. But the machinery for making this matting lies idle, so great is the demand for coarse cloth for cotton bagging.

The *Interstate Grocer* calls attention to the danger which threatens the California dried-fruit industry from the dishonest methods employed by many shippers. Prunes, which the producer sells in boxes bearing a number that indicates how many fruits go to the pound, are repacked in deceptive ways; and old prunes which have been treated to give them a fresh appearance are mixed with the new. Old currants, too, are "steamed, syruped, mixed, repacked and sold as new;" and, moreover, the shipping marks of reputable importers are forged on the fruit-boxes. Our contemporary advises retailers to weigh fruit carefully before purchasing, or, better still, to buy the prunes which come in sacks instead of those in boxes.

We have just received a sketch of the life and services to American horticulture of the late Peter Henderson, which was read before the New York Florists' Club by Mr. A. D. Cowan. One of the interesting facts brought out in this paper is that when "Gardening for Profit" was prepared Mr. Henderson was occupied with his business for sixteen hours a day and the book was written in the short noon intervals and in the small night hours. The author wrote lying on his back with his head bolstered up to rest his body while his active mind kept at work. We quote this not so much to show Mr. Henderson's industry and energy as to call attention to the fact that this most successful of all his books, and probably the most useful work on market-gardening ever published, was written directly from the author's personal and daily experience. Perhaps this will help to account for its high practical value.

Timber thieves had become so numerous in Burlington and Ocean Counties, New Jersey, that, a few years ago, a Timber Protective Society was established, which employed detectives to patrol the woodland tracts in many townships. Of late this precaution has been abandoned, and the thieves have again become so bold that fresh measures are being taken to combat them. A correspondent of the New York *Tribune* recently wrote: "A few days ago an owner paid a visit to his tract of Cedar swamp, a few miles from Pemberton, Burlington County, with the idea of having it cut and converted into lumber. From the outside the swamp seemed to be in good condition, but, on pushing through the underbrush a short distance, he was surprised to find that the tract had been stripped. Nearly all the best timber had been cut and carried off. Hundreds of tracts have been despoiled in this manner."

The hot-house peaches in market, although somewhat small in size, are of excellent quality and well ripened. They bring fifty cents each in the fruit-shops. Peen-to Peaches from Florida have been on sale for a fortnight; they are not of the best quality and have sold for twenty-five cents a quart. Black Hamburg and Muscat grapes sell for $4 a pound; the Muscats are not as large as usual. Fine hot-house-grown Sharpless strawberries bring $2.50 a cup, which contains sixteen berries, in spite of abundant receipts from the South. West India mangoes have just arrived, and being the first of this season's growth are very good, but not of a very large size; they sell for from seventy-five cents to $1 a dozen. Porto Rico pines are just here; they are very much larger than the ordinary fruit, weighing from five to ten pounds each, and bring $1.50 apiece. Grape-fruit will soon be out of season. More than twice the quantity has been sold here during the winter than during any previous year. The prevalent belief that it corrects malarial tendencies has largely increased its use.

Central Park is particularly attractive just now. The colors of the expanding leaves are quite as varied as those of autumn foliage, and the grass is unusually thick and green. Next to the Dandelions, which gem the turf everywhere, the most abundant wild flowers are the Spring Beauties, which, on some slightly shaded slopes, seem to have taken almost entire possession of the soil. In the natural wood, in the northern part of the park, there are great sheets of the cream-white flowers of Dicentra, and on exposed rocks the delicate panicles of the Early Saxifrage are opening in great abundance. For some cause the Dog's-tooth Violets, which usually bloom very freely in the park, show scarcely a flower this season. Many of the low-growing herbaceous perennials, which have been largely planted of late years, are now in flower, and masses of Moss Pink, Aubrietia, Rock Cress, Armeria, Stemless Gentian, Primroses, Stitchwort (*Stellaria Holostea*) or Epimedium can be found along almost any path or drive. In some places the masses are too large, glaring and obtrusive, but generally they are well placed. The stretch of Heather along the bridle-path near Eighty-second Street is particularly pleasing. Among the shrubs our native Spice-wood is blooming profusely; the Forsythias, especially those which were severely pruned last year, are doing fairly well, and Thunberg's Barberry is covered with flowers; but one misses the blaze of scarlet which the Japan Quince ought now to be displaying. This is one of the shrubs which has suffered from the open winter, as have the Hazels and Alders and the early-flowering Honeysuckles—*Lonicera fragrantissima* and *L. Standishii*.